Annual report 2008

Gram, Sarah

Publication date:
2009

Document Version
Early version, also known as pre-print

ANNUAL REPORT 2008

08

International Center for Innovation

ANNUAL REPORT 2008
This Annual Report is an introduction to the International Center for Innovation (ICI) and the work that has been done throughout 2008. The annual report is an overview of some of the activities, projects and events that have taken place in ICI in 2008.

We hope that the report will give you some idea of the nature of ICI and inspire researchers, industrial partners, students and others with an interest in innovation and innovation of business models to join the activities in ICI and to look for more detailed information about our research areas, network partners or individual projects.

More information is available at:
www.ici.aau.dk

International Center for Innovation
Aalborg University
Center for Industrial Production
Fibigerstræde 16
9220 Aalborg Ø
Denmark

08

colophon

International Center for Innovation's annual report 2008 is published by
ICI (International Center for Innovation), Fibigerstraede 16, DK-9220 Aalborg

- **EDITOR** Sarah Gram, ICI
- **EDITORIAL STAFF** ICI
- **GRAPHIC LAYOUT** 1:1grafik
- **PRINT** Lasertryk
- **CIRCULATION** 500 copies
- **TIME OF RELEASE** 2009

CONTENTS

Welcome to ICI

The International Center for Innovation aims to remedy the situation that many businesses find themselves unable to achieve or maintain sufficient levels of competitiveness and profits despite extensive and rapid product innovation.

> *'Danish businesses tend to think narrowly when innovating, thus missing global business opportunities. International Center for Innovation (ICI) will create groundbreaking forms of strategic innovation across industry boundaries.'*
>
> Peter Lindgren, Head of ICI

Imagine, for example, if nano solar cells were applied to façade and roof paint or even building materials. Renovation of buildings could then become an income instead of being an expense, because it enables the owner of the building to be the supplier of energy and diminishing CO2. In a long term perspective renovation of buildings would lead to completely new business models which have never been seen before. Thus, would the co-operation provide business models for all five industries that they could never have gained - standing alone.

GLOBAL INNVOVATION IN THE NORTH DENMARK REGION

International Center for Innovation in the North Denmark Region is rooted at the Center for Industrial Production (CIP) and is frequented by a number of professional milieus, deriving from all three faculties at Aalborg University.

ICI received its grant in December of 2007 with the purpose of creating fifteen different networks in North Denmark, networks that aim to transcend traditional lines of business and national boundaries in an effort to innovate new business models for the globalized market place. ICI is a regional initiative which is supported by "Vækstforum Nordjylland" (Growthforum in the North Denmark Region) and carried through in collaboration with "Væksthus Nordjylland" (Business Link North Denmark) and and leading knowledge consultancies. With their knowledge of North Jutland's business life, they play an instrumental role in the co-operation with the participating businesses.

International Center for Innovation is located at Aalborg University, Fibigerstraede 16, 9220 Aalborg

The regular staff of ICI is composed of the secretariat, researchers, a governing body, and in 2009 also an international advisory board. Individual projects within ICI will be given the research funding and workforce needed, as well as access to the ICI LAB, making it possible for the networks to successfully complete their projects.

ICI is a globally minded initiative and it made its international debut in September 2008 in Silicon Valley. ICI is also in close co-operation with CTIF (Center for Tele-infrastructure – www.ctif.aau.dk) and has through the center set up research offices in Mumbai, Tokyo, Athens, Rome and Copenhagen.

Innovation Expedition participants at Yerba Buena Gardens, San Francisco

www.ici.aau.dk

International Center for Innovation website: www.ici.aau.dk

CONTACT

The project is currently open to new participants in the upcoming networks. Interested parties are welcome to contact Morten Lund, Center for Industrial Production, Aalborg University, on +45 4088 8877 or John Ebsen, Væksthus Nordjylland, on +45 7021 0808. Read more about the project at www.ici.aau.dk

ICI – status 2008

Peter Lindgren, Center Manager, International Center for Innovation (Photo: Mette Johnsen)

2008 was International Center for Innovation's (ICI´s) first operational year. It was a year when ICI established its organization and began developing its business model and network regionally, nationally and internationally.

ESTABLISHING AN ICI ORGANIZATION AND ADMINISTRATION

Our main activity during the first year was to establish the ICI Board, the ICI Management team, and the administration. ICI has a rather complex construction due to the concept on which ICI is built – innovation, flexibility, continuous uptake of network partners and network consortia, different network constructions and a mix of partners from industry, the research community, and other knowledge organizations. The final administration procedures for ICI will be formed in the beginning 2009 together with Growthforum's Secretariat and the Danish Enterprise and Construction Authority. This work will be usefull in the further development of ICI as regards quality, the speed of handling applications coming into ICI, and also the funding economy behind ICI. You can read more about the ICI organization and administration on page 31 and 32.

INNOVATION OF NEW GLOBAL BUSINESS MODELS

In 2008 ICI began the development of methods and models for innovation of new global Business models. This work was mainly developed by ICI researchers, and at the end of 2008 some 11 modules where developed within: Innovation Leadership, Business Model Typologies, Innovating Business Models, Project Definition Report 1 (PDR 1) and Project Definition Report 2 (PDR 2), Userdriven Innovation, Green Business Models, Innovation with Different Intellectual Capabilities (ICA), Networkbased Innovation, Blue Ocean Innovation, Risk Management of New Business Models and last but not least Implementing New Business Modules. These modules are now ready to be used as methods and modules both by companies, researchers and others. You can read more about the research areas in ICI on page 20-29.

INNOVATION-KNOWLEDGE -INFRASTRUCTURE

In 2008 ICI began the development and build-up of an innovation knowledge infrastructure – including a web portal www.ici.aau.dk and a service portal for companies, organizations and researchers. The plan is for this work to be completed by the spring of 2010. In 2008 ICI established its communication structure and platform including ICI´s first website, a newsletter, and a CRM system. ICI also made extranet and intranet structures for partners, network consortia and others that were involved in ICI. ICI´s knowledge structure and platform will continue to be developed the next years in response to the continuously changing demands from companies, researchers and others.

GLOBAL INNOVATION HOTSPOTS

ICI marked its official opening with an expedition to the world's no. 1 innovation hotspot, Silicon Valley. On that occasion, the first steps were taken towards cooperation between ICI and Silicon Valley players in such areas as prototype development in virtual worlds and customer-led innovation.

ICI's Innovation Expedition took place at the beginning of September and included 26 representatives from primarily Danish businesses and universities. The trip was arranged in collaboration with Innovation Center Denmark in Silicon Valley and the three-day conference at Stanford University was arranged in collaboration with Stanford University Lab and the MMT program at Aalborg University.

Read more about the opening on page 8-13, and about the close cooperation between ICI and Innovation Center Denmark in Silicon Valley on page 35.
ICI also held several meetings and talks with

Innovation Center Denmark in Munich and attended the official opening in 2008. On the 18th of June 2008 ICI attended the official opening of the center as a part of a research and business delegation invited by the Ministry of Science, Technology and Innovation. The delegation investigated the cooperation options that already exist between the two regions, and which will be further extended through the efforts made by the innovation center, in the areas of research and business, and possibly elsewhere.

Further ICI established a close network cooperation with Center for Teleinfrastructure (CTIF) which provides ICI and ICI related researchers, companies and others with the possibility to use CTIF network and offices in Tokyo, Japan, Mombay, India, Rome, Italy, Copenhagen, Denmark. This unique opportunity will be developed further in 2009. The development will also help ICI become attractive to companies, researchers and knowledge companies together with students at Aalborg University, who now have some unique possibilities via ICI to visit and work in companies and organizations, e.g. in these global innovation hotspots. Read more about Center for TeleInFrastructure on page 38.

In 2009 ICI will increase its destination with up to three more hotspots – hopefully Shanghai, China, Munich, Germany and Sao Paolo, Brazil, South America.

RECRUITMENT OF PROJECTS AND NETWORKS

The recruitment of the fifteen ICI networks began already in 2007. This made it possible to present the first three networks to the board for acceptance, in 2008. Two networks were accepted and are working with ICI to bring their new business models to the global market. You can read more about the first two networks: Provital and Access2Innovation on page 16-19.

The recruitment system has now been established and ICI expect to have several new networks up and running in 2009.

ICI LAB – AN INTERNATIONAL INNOVATION LAB

The establishment of an international innovation laboratory – ICI LAB – is one of the most important elements in ICI. In this lab development, test and market introduction strategies and plans for the fifteen new global business models are expected to be carried out.

The ICI LAB is challenged by some ambitious visions. The ICI LAB is supposed to match the demand for a high degree of flexibility, agility, and ability to run independently of physical locations – whereever the fifteen innovation projects want the work to take place. Further the vision is to establish an ICI LAB that is able to merge companies, researchers and other knowledge competences together in the ICI LAB independent of time, place and ICT platform. Researchers and knowledge consultancies have worked hard on the idea and vision in 2008 and have now finally managed to reach the final ICI LAB concept.

During the progress period 2008, ICI LAB has called upon advise and assistance from experts from the Aalborg University, Center for Industrial Production, AAU; Stanford Humanities Lab, Stanford University; Stanford Research Institute (SRI); Center for TeleInFrastructure (CTIF) AAU; Chalmers University of Technology; University of California, Berkeley; University of Lausanne; Danish Technological Institute; Lund University; Strandgaard Consult; Framework Identity; Farsø sparekasse; consultant Rasmus Johnsen; younoodle.com etc. to form the basis for ICI LAB. The work has now been completed, and in 2009 the ICI LAB will finally be rolled out. In this work and roll-out, the ICI LAB has decided to join forces with researchers and computer science experts at Standford University who are developing a new open source platform called the SIRAKATA project – www.sirakata.org.

2008 was indeed a busy and hard working year. Thanks to some hard working employees at ICI and open minded and willing network partners we feel that ICI has indeed fulfilled its goals for 2008.

Peter Lindgren
Center Manager, International Center for Innovation, Associate Professor, PhD

Inaugural expedition to Silicon Valley 1

INTERNATIONAL CENTER FOR INNOVATION LAUNCHES CO-OPERATION IN CALIFORNIA

The International Center for Innovation (ICI) at Aalborg University has marked its official opening with an expedition to the world's no. 1 innovation hotspot, Silicon Valley. On that occasion, the first steps were taken towards co-operation between ICI and Silicon Valley players in such areas as prototype development in virtual worlds and customer-led innovation.

NORTH DENMARK CONSTRUCTION INDUSTRY BEGINS CO-OPERATION WITH STANFORD UNIVERSITY´S 3D UNIVERSE

The ICI expedition brought together SmartCityDK – which is a construction industry competency center based in North Denmark and a partner of ICI – and researchers at Stanford Humanities Lab. The parties have now taken the first step towards co-operating on the production of virtual buildings using the 'Wikitecture' model.

Head of the research project at Stanford Humanities Lab, Henrik Bennetsen, explains the concept: "We transfer the Wikipedia concept, which allows anyone to participate in creating and improving on a product, to the construction industry, providing a space in which people of different backgrounds can meet and create virtual construction projects together. This type of 'crowd sourcing' draws on collective intelligence as opposed to one-track development, he says".

Claus Egerland of the Aikon Group, an active participant in SmartCityDK, approves of the idea. "The more people who compete to create

Venture capitalist Lars Leckie of Hummer Winblad Venture Partners

Jeff Snider of Next Stage

NEW BUSINESS MODELS IN SILICON VALLEY

At a network reception, venture capitalist Lars Leckie of Hummer Winblad Venture Partners told the ICI expedition about the new business models he currently sees emerging from Silicon Valley. His investment company works with software businesses at an early stage and often searches for potential investment opportunities in Denmark. "When Microsoft launched Windows, Danish was one of the first languages that it was translated into. That says something about Denmark's general position and knowledge in the software field", he says.

www.humwin.com

Jeff Snider of Next Stage helps Nordic businesses enter the US market and has e.g. worked to raise venture capital for Danish gazelle businesses. He was the chairman at the expedition's meeting with Lars Leckie and will now discuss co-operation with ICI networks on how business models can be launched globally.

www.nextstagebiz.com

knowledge, the better my product becomes because we don't have to invent every aspect ourselves", says Claus Egerland, who has just launched Aquula, a brand new element system that reforms our perception of kitchen and bathroom furniture'.
The North Jutland construction industry already represents a strong cluster in the region. However, if the building industry is to continue to produce the houses of the future, virtual 3D construction projects can save enormous development resources and accelerate innovation, according to Per Toppenberg, representative of the North Denmark Region in SmartCityDK.

"This is not about trying out a new fancy technology. We have to find some models that will create cash flow and jobs. The construction industry is developing so rapidly that we need be able to test the products quickly", he says and predicts that the 3D universe will be necessary for SmartCityDK, especially in the home care area. "The development of smart houses adapted to residents who have reduced eyesight or hearing will be an important industry area in the future", he predicts.

Stanford Humanities Lab works with Stanford's Computer Science department, which is developing a 3D platform featuring greater user friendliness and improved graphics than the existing virtual universe Second Life, which had struggled to reach critical mass. The Stanford Computer Science department enjoys an almost mythical status in Silicon Valley as the place where success stories such as Google and eBay originated.

The idea is to test the new platform in the research project to be established in the coming months by ICI, Stanford Humanities Lab and SmartCityDK, whose project manager Jesper F. Carstens, regards transatlantic co-operation as an exciting element in the development of the construction industry in North Denmark. "This really provides us with a unique opportunity to conduct research on concrete construction projects in collaboration with the world's leading capacities in the virtual field", he says.

www.shl.stanford.edu

www.smartcitydk.dk

CLOUD COMPUTING AT VM-WARE

At VMware, the ICI expedition was shown how the company's virtualization software makes it possible to divide one physical server into several virtual servers, which provides a major boost to the degree of utilization of computing power and storage. Director of Application Virtualization Henrik Rosendahl explained how the company has pioneered this type of "Cloud Computing", which results in energy savings of up to 80 per cent and enables you e.g. to install Microsoft Office in 30 seconds. VMware now has 120,000 customers, including the 100 largest companies quoted on the stock xchange, and has a turnover of 1.3 billion dollars.

www.vmware.com

From left to right: Henrik Bennetsen, head of the research project at Stanford Humanities Lab, Per Toppenberg, representative of the North Denmark Region in SmartCityDK, Jeffrey Schnapp, head of Stanford Humanties Lab, Jesper Carstens, project manager in SmartCityDK, and Gert Spender and Claus Egerland of the Aikon Group. The new partners will now use Stanford Computer Science Lab's new 3D platform in researching the development of the houses of the future.

Inaugural expedition to Silicon Valley 2

USER-LED INNOVATION RESEARCH IN INTERACTION WITH CALIFORNIAN ENERGY SECTOR

The user as a key part of innovation development will be one of the cornerstones of the ICI networks' "Blue Ocean" concept, which focuses on the entire chain of customers and their various sets of values.

A concrete example of this concept is the project Intelligent Utility, which consists of ICI researchers who have joined up with KMD Energy, E-box, Develco, EnergiMidt and Odense Energi to develop intelligent energy control in private homes.

The ICI expedition brought Intelligent Utility representatives together with one of the largest energy companies in the US, Pacific Gas & Electric (PG&E). PG&E will be co-operating on the "toolbox" method, which innovates by observing how so-called "lead users" have created their own new energy solutions. This is the first time the toolbox method has been used in the energy sector. At PG&E, Lee Cooper, manager in the Emerging Technologies department, is very interested in the research and energy-saving solutions that will result from the Intelligent Utility project. PG&E already has more than a million intelligent energy measurement units, the so-called "smart meters" installed at customers and aim to have ten times as many before 2011. The smart meters are able to transmit data between the consumer and the energy company, including how energy is used, how much is used, and the cost of energy at various times of the day.

"We continuously develop the product, adding new user functions, so it is important to us to constantly receive new input for the type of energy solutions that energy consumers require. In this connection, the 'lead user' method is a key element, and therefore it will be exciting to co-operate with Intelligent Utility on this", says Lee Cooper. Under the heading "Show me your Storm P. solution", ICI researchers will now reach Danish Gyro Gearlooses through a research project which represents a paradigm shift, according to Jacob Høj Jørgensen.
"Customers are no longer passive buyers. We find those users who know where their problems lie and have thought of solutions themselves which they would be happy to share with others", he explains. The co-operation with Stanford University and PG&E are the first results of ICIs presence in the leading US innovation environment, where ICI researcher René Chester Goduscheit, based at Stanford, will be stationed during the winter of 2008-2009.

"In Silicon Valley, we are close to the businesses and researchers who really set the agenda for the practical implementation of innovation. By building close contacts around joint projects, North Denmark is given a major push ahead in its efforts to develop the products and services of tomorrow", he says.

www.intelligentutility.dk
www.pge.com

ICI researchers Jacob Høj Jørgensen (left) and René Chester Goduscheit (right) with Pacific Gas & Electric's Manager of Emerging Technologies, Lee Cooper.

PLUG AND PLAY FROM DAY ONE

Plug and Play Tech Center is Silicon Valley's launch pad for new businesses. There, entrepreneurs can rent office space, network together and get consultancy assistance with obtaining venture capital. The center currently hosts more than 160 businesses, which have raised 400 million dollars of investments. Innovation Center Denmark in Silicon Valley is a strategic partner of Plug and Play Tech Center and helped the ICI expedition arrange a visit to the center.

ROUND-TRIP TO SECOND LIFE

At the premises of Innovation Center Denmark in Silicon Valley, the ICI expedition met with Eilif Trondsen, head of the Stanford Research Institute Business Intelligence department and its spinoff project VirtualWorlds@work. Eilif Trondsen helped the ICI delegation take a round-trip to the current Second Life, in which Glen Fischer of Linden Labs business programs flew in as an avatar and demonstrated how this universe can be used in a number of professional contexts.

Eilif Trondsen also presented examples from his own research and showed the ICI group how millions can be saved on oil rigs by simulating geophysical data in a virtual world, where engineers can meet and plot the next drilling. ICI and Innovation Center Denmark are now in negotiations with Eilif Trondsen on participation in the VirtualWorlds@work consortium.

www.sric-bi.com/vwc

LITEPOINT AND THE WIRELESS VALUE CHAIN

In 2000, Benny Madsen from North Denmark started LitePoint, which produces electronic measurement equipment for the wireless industry. Previously, he had worked at Dancall and was the leader of the team that designed the first GSM phone.

He discussed the wireless value chain, which includes chip manufacturers, OEMs, and the various mobile phone brands. LitePoint is headquartered in Silicon Valley but also opened an office in Denmark earlier this year.

"Denmark has more than 30 years' experience of developing mobile technologies and surely the highest concentration of engineers with competencies in this field", says Benny Madsen.

www.litepoint.com

Inaugural expedition to Silicon Valley 3

INNOVATION CONFERENCE AT STANFORD

ICI and Aalborg University's MMT (Master of Management in Technology) programme held an all-day conference at Stanford University, where leaders of Silicon Valley within networking, innovation and design gave presentations.

http://stanford.edu

Professor Larry Leifer, head of the Center for Design Research and Stanford Learning Laboratory at Stanford University. On the basis of a number of design cases, he explained how the mantra "Don't ask what you have learned, ask how your experience was" can be transferred to concrete design projects, such as the redesign of BMW's open sports cars to reduce the discomfort caused to drivers by the wind.

Woody Powell is head of the Scandinavian Consortium on Organizational Research (Scancor) at Stanford University. He explained how the research cultures in universities and private businesses, which used to be quite distinct, have now started to come together, creating new opportunities of co-operation. Innovation in networks is one of Professor Powell's research areas, and he described how industry hubs such as Boston and Silicon Valley are able to raise the collective level of knowledge. "The intensive competition makes you better. Going to Silicon Valley is like swimming with Olympic gold medalist Michael Phelps", he says.

Head of research projects at Stanford Humanities Lab Henrik Bennetsen has studied virtual worlds in recent years. "Business models based on the traditional consumer-as-customer concept have typically failed in virtual worlds. For example, who would want to drink virtual cola?", he asks and emphasizes that the open source concept pioneered by Linux will also gain popularity in virtual worlds, where users will enhance each other's designs.
At the end of the conference, the ICI expedition had a 'fireside chat' with Henrik Bennetsen and Professor Jeffrey Schnapp (left), the founder of Stanford Humanities Lab.

NEW PLATFORM FOR ENTREPRENEURS

The company YouNoodle is behind a social network of entrepreneurial businesses that has attracted much attention in the worlds of investors and innovation. YouNoodle's head of development, Rebecca Hwang, told the ICI expedition about the requirements underlying the initiative, which counts thousands of entrepreneurs, researchers and investors among its active users.

"How does a business developing e.g. LED lights find out what type of innovation is already ongoing within that field in the rest of the world? How can I, as a new business with a limited budget, create a profile that will be seen by investors? And how do I differentiate my business and find my niche if I don't know what is going on in my field?" According to Rebecca Hwang, the answer is YouNoodle.com, which already has many Danish members.

www.younoodle.com

One of ICI Research Fellow Kristin Falck Saughøj's research areas is how diversity can promote innovation. At YouNoodle, the ICI delegation was shown how that concept has been realized by the company.

Danish Joachim Krebs, seen here with Rebecca Hwang, is Chief Technology Officer with YouNoodle and works i.a. with bringing Danish players onto the platform. He is also one of the driving forces behind the company's much noticed start-up predictor tool, which has developed an algorithm that predicts the value of entrepreneurial businesses based on team composition, product evaluation and market analysis.

The ICI Innovation Expedition took place at the beginning of September and included 26 representatives of primarily Danish businesses and universities. For further information on ICI and the Innovation Expedition, please contact us at www.ici.aau.dk.

ICI LABoratorium

ICI LAB
ICI LAB will be a central element for International Center for Innovation (ICI) in the development and facilitation of idea and concept generation, prototyping, and market promotion of the fifteen new global business models.

Basically many challenges need to be met in connection with innovation of business models. Many competencies and many business enterprises and researchers are in play in ICI, working from different locations around the world, and this calls for a flexible methodical and goal oriented platform in order to reach the results, ICI and its partners wish to accomplish with the new global business models.

ICI LAB works to create a knowledge base for business model development and to develop a new 'toolbox', which may help projects, businesses, researchers, and organizations to develop a goaloriented business model innovation procedure which will secure a high degree of innovation accuracy.

RESEARCH
ICI LAB's goal is to welcome all interested researchers to conduct innovation research and development in areas of innovation relating to the innovation of new global business models. This is primarily achieved through an action research approach in which researchers interact in the innovation processes of the fifteen ICI networks in order to be in a position as close as possible to the knowledge on the basis of which successful global business models are created. In the global and international perspectives the vision is for ICI LAB to be established in close cooperation with ICI's international innovation beachheads, which will secure that world-class international research and knowledge on business model innovation are attracted to and integrated in the laboratory, and that this knowledge is made available to businesses and knowledge resources in North Jutland.

ICI´S IKT PLATFORM
In a project with so many businesses, Danish and international researchers and knowledge consultants as well as many other attractive interested parties it is essential that ICI LAB has a strong information, communication and technology platform which makes interaction easy and flexible. Taking Web 2.0 as a starting point, ICI LAB is at the cuttingedge of how to support an innovation process and secure speedy and efficient progress. The challenge is to make tools and methods interact in order to achieve valuable knowledge and "GTD" - Getting things done, as the term is in Web 2.0 language.

On the basis of this mindset, ICI LAB is engaged in creating interaction between a physical and a virtual process, integrating and combining the best of both worlds. The future is just around the corner – and therefore ICI LAB expects to go 'Web 3.0' together with Stanford University in 2010. The next generation of the fusion between the physical and the virtual worlds is approaching, the internet will become 3-dimensional, providing completely new possibilities and ways in which to carry out innovation work and, not least, in which to visualize working processes and business models.
This is why ICI has initiated close cooperation with Stanford Humanites Lab and Computer Science as well as CTIF. Here ICI contributes with experience, knowledge and

Morten Lund,
ICI LAB Manager

business model development, and Stanford and CTIF contribute with the technology and expertise behind ICI LAB's technological platform.

KNOWLEDGE SHARING

When working with development of global business models in the fifteen ICI networks, ICI collect all empirical documentation currently in the form of video, texts and data in a large ICI LAB empirical database. In this way unique knowledge is acquired concerning business models, business model development – and with that research opportunities on what may generate success or failure in business model development.
All this knowledge is not only intended for research purposes, it also serves as knowledge sharing between project participants and thus supports project endeavours to create the fifteen new global business models.

This knowledge will currently be made publicly accessible on ICI's website and information portal. New knowledge, new methods, and new models for business model development will be published once they have been validated and tested.

WORKING METHOD AND PROCESS

ICI LAB is constituted by two innovation fields – an 'idea and concept laboratory' and a 'prototype, testing and market developing laboratory'.

In the main, the ICI LAB process initially aims at developing new business model ideas and creating business model innovation, whether this be incremental or radical innovation. One of the ways in which this is accomplished is through a number of newly developed business model modules and games, which may facilitate the process.

The conceptualization phase will clarify the extent and the areas in which efforts must be made when creating the new business models and will define the business model for prototyping and market promotion. When prototyping and market promoting the business model, ICI LAB will draw on knowledge from the entire University world, as well as external knowledge consultants and experts. All parties involved are encouraged to contribute with their concrete knowledge about the areas relating to the business models. The ICI vision is to be able to create tools of a standard high enough to facilitate visualization of business models and subsequently creation of virtual business model prototypes, which may be tested in various scenarios and business cases. ICI's goal is, however, to make sure that the new business models reach the global market as speedily and efficiently as at all possible. In this way ICI LAB hopes to be able to create a core competence for business model development. All business models are tested before they are released in the market, and at the same time they are subjected to risk analysis to secure that the success rate will be as high as possible.

In February 2008 a number of partners and interested parties convened to discuss how ICI LAB might be constructed.

Provital – Future water treatment systems in North Jutland

Provital has developed a revolutionary filtering system, which will not only replace traditional sand filters but also reduce water consumption, energy consumption, space consumption, running expences, and maintenance. The Provital network is the first project which International Center for Innovation (ICI) has decided to support by DKK 2.5 million for development of the business model behind the new filter system.

International Center for Innovation will in future cooperate with the newly established enterprize Provital and its network partners on assisting them with the development of innovative business models and strategies for filter solutions so that they may become well equipped for competing in the global market.

PROVITAL AND WATER TREATMENT

Provital is a joint venture company between Løkken Spa & Pool A/S (Ltd.) and Cometas A/S (Ltd.), who came together to develop a revolutionary filter system, which cannot only replace traditional sand filters but also reduce water consumption, energy consumption, space consumption, running expenses, and maintenance.

"Primarily, the filter system was developed for the spa and pool trade, which has already established test systems in Skallerup Klit Feriecenter (holiday resort), and elsewhere. But at present we also run pilot tests in other branches of trade, including garage car wash cabins, where oil and petrol spills constitute a big problem", Paw Juul from Provital explains.

INCREASING INTERNATIONAL FOCUS ON ENVIRONMENT

The increasing international focus on the environment, and not least on climate changes, results in a large growth potential for climate and environment friendly technologies such as Provital's filter solution, and not only on a national level.

This is an area in which Denmark is already exposed internationally, and in which the Provital network will have a chance to assert itself as in future many other countries will have a big need for energy and environment friendly solutions. So we are moving away from the idea of the past that sustainability and growth are polar opposites. What is therefore crucial for Provital is to cooperate with International Center for Innovation (ICI) on the development of the business around the filter, so that the network will be well prepared for the global market and able to secure maximum value creation in the companies and in the North Denmark Region.

Provital's filter system is based on a cuttingedge SiC membrane technology with micro and ultra filtering. These membranes have a high level of water circulation in spite of their small size.

A SUSTAINABLE BUSINESS MODEL

The potential of Provital's filter systems is evident, but the most recent development, particularly in the light of the financial crisis, indicates the line between a sustainable business model and a non-sustainable one is razor-sharp – even in case of a very strong product.

The ICI board and Center Manager Peter Lindgren believe it is obvious that the community and the industry of the future are extremely dependent on the ability to understand, read and innovate businessmodels. Survival is at stake, and we cannot afford to make very many mistakes. What is also at stake is the ability to be innovative and to innovate sustainable business models – the ability to think 'across boundaries'.

In the future, the very ability to create innovation of business models across competencies and branches will be crucial for the survival of a company. At the same time, the ability to create innovation accross networks will be increasingly important for future innovation enterprises. The ICI project is a good example of both, as in future the Provital network comprizing: Skallerup Klit Feriecenter (Holiday resort), Netlon A/S (Ltd.), VVS Kaj Larsen, Kemic Vandrens A/S (Ltd.), Cometas A/S (Ltd.), and Løkken Spa & Pool will cooperate on the development of the business model around Provital's filter system.

Managing director Ole Hjørringgard presents a prototype of Provital's water treatment system.

Several elements in Provital's filtering system make it valuable for customers. First of all, the filtering system saves space, energy, and water, it requires little maintenance, running costs are low, and at the same time it meets all requirements regarding maintenance of water quality. What is now essential for Provital is, to cooperate with its network partners on developing a business which will support the product and take advantage of the exceptional potential presently held by all the network partners in combination.

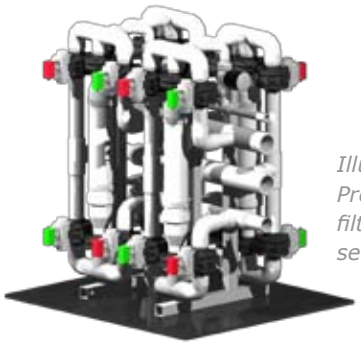


Illustration of a Provital pool water filtration solution set up in 2 rows.

In the long term it is expected that the cooperation between ICI and existing and future network partners will result in the establishment of an international market for business models within the field of filter systems. Provital expects that this will be instrumental in attracting jobs to the region, including knowledge-intensive jobs, and others.

Skallerup Klit Feriecenter is part of the Provital network and uses a prototype of the filter at their spa's.

PROJECT INFORMATION

Provital
Egevej 60
9480 Loekken
Denmark
Phone: + 45 7020 7258
Fax: + 45 7020 7268
E-mail: info@provital.dk
Web: www.provital.dk

Status

Provital and ICI are signing the final project contract primo 2009

NETLON® Skallerup Klit® CoMeTas provital

Access2innovation

The question isn't *'why'* but
'why the heck hasn't this been done before?'

Having civil society organizations collaborating with universities and private, commercial companies in an effort to develop innovative, low-cost solutions for the third world is a simple idea. But as simple ideas come – this is one of the better...

The Access2innovation network is the second project which International Center for Innovation (ICI) in 2008 decided to support by DKK 2.2 million for development of the business model behind two projects that serves to develop low-cost solutions within mine clearing and monitoring and reporting.

ACCESS2INNOVATION - A NETWORK OF CIVIL SOCIETY ORGANIZATIONS COLLABORATING WITH UNIVERSITIES AND PRIVATE, COMMERCIAL COMPANIES

Developing simple low-cost solutions to combat poverty is by no means a new idea. It has its roots in the 1970s, when economists and designers looked for simple, low-cost solutions to combat poverty. A number of ideas have been developed over the years and show that innovative cost-effective solutions can increase access to food and water, energy, education, healthcare, revenue-generating activities, and affordable transportation for those who need them the most.

However, it is only within the last few years that working relationships involving Civil Society Organizations, Universities and Commercial Companies have begun to evolve. They have created new solutions, based on high-tech knowledge, experience and best practice, which – combined with local knowledge and insight – have solved previously insurmountable challenges in daily life.

Despite a number of positive experiences, only a very limited number of strategic partnerships actually exist. Mainly because of lack of knowledge about needs and possibilities on behalf of the universities and private companies, and of the tendency for civil society organizations to keep commercial interests at an arm's length. This means that those who need it the most are kept away from the innovative process and that the gap between the rich and poor of this world is widening.

Access2innovation aims at developing knowledge and network based business models including hands-on products and services that are:

- Better than existing solutions.
- Cheaper than existing or comparable solutions.
- Sustainable.
- True to the Code of Conduct for relief and development aid.

Clearance: Vegetation makes it difficult to form a general view of, and plan the clearance of the minefields

MONITORING AND REPORTING WITH THE USE OF PURPOSE PROGRAMMED HANDHELD UNITS (PDAs)

Real time information, demand for project monitoring and ongoing contact between head quarter and field activities is a crucial aspect in relief and development work. Technologies exist, but so far little attention has been put

Partners

NetImage (www.netimage.dk) Gomspace (www.gomspace.com) InnovationHub
communicateIT (www.communicateit.dk) Folkekirkens Nødhjælp (www.dca.dk)

into adapting these to the work of relief and developmental organizations. Access2innovation will be targeting one of the administrative burdens over the coming years; monitoring and reporting on different projects with the use of purpose programmed handheld units (PDAs).

By developing and implementing a PDA-based system that is easy to use, a number of the above mentioned problems could be solved. Experience exists from the digitalization of local authorities in Denmark, but a number of challenges arise when adapting and transferring both software and hardware to relief and development work.

A crucial aspect is that most of the potential PDA users may have limited computer experience and/or writing abilities, which is why it is of the utmost importance that the PDAs are easy to use, possibly with an icon-based interface.

Furthermore, in order to communicate reports from the field to the main databases, the PDAs need to be able to connect to whatever communications network is available. In Africa, where GSM coverage is sparse outside heavily populated areas, this may mean either expensive satellite communication or different types of radio communication systems.

Over the coming years, DanChurchAid will provide the platform for developing efficient PDAs within the operations of the Humanitarian Mine Action Group. This will provide access2innovation with an extensive insight into the possibilities of existing technologies and the potential to mainstream they gained expertise into relief and development work for both small civil society organizations and international agencies.

MINE CLEARING - EYE IN THE SKY

Mine clearing is a bit like looking for a very explosive needle in the proverbial hay stack. One of the overarching challenges is that it is virtually impossible to inspect the potentially contaminated areas, and for security measures larger areas close to the mine fields are often included as Danger Areas. Adding to these abandoned areas often mean that bush land flourish, making it extremely difficult to get a visual insight into the dangers ahead or the direction to take.

Based on technology developed by the University of Aalborg and experience from DanChurchAid's wide area mine detection system (WADS), access2innovation will aim at developing an "eye in the sky" over the coming years. An airborne GPS controlled camera that will enable detection of abandoned roads, old military installations and buildings from a low altitude. With an eye in the sky it will be possible to minimize the potential danger area and not the least ensure that the local communities will re-gain access to farming land, water points, abandoned buildings etc.

Developing an efficient mine detection system that allows determining the potential position of mine fields from the sky would be a great step towards a faster, better, safer and more efficient mine clearing in every mine field across the world.

Project information

Access2innovation
Anne Maries vej 13
9000 Aalborg
Denmark
Project Coordinator: Jacob Ravn

Phone: +45 2770 2318
Email: jacob@plan.aau.dk
Web: www.access2innovation.com

Status

Access2Innovation and ICI are signing the final project contract in 2009.

ICI profils

INNOVATION AND BUSINESS MODEL RESEARCH IN ICI

In today's complex, knowledge and innovation-driven economy, innovating business models and their architecture are in growing demand. In 2008 an American Management Association study determined that no more than 10% of innovation investment in companies and very little innovation research are focused on developing new business models. A research group at Aalborg University – The Newgibm group – found some of the same indications and results in Denmark – particularly based on data from the North Denmark Region.

Most innovation that companies are focusing on is product innovation – especially incremental product innovation - and most company and research resources are spent on innovation within the idea and concept development phase - leaving a large number of ideas and concepts never commercialized. Because the lifecycle of new products today is continuously being reduced, and due to the fact that product innovation is being carried out at an ever increasing speed, and is increasingly user driven and often quickly copied by competitors – often from low cost countries -, companies and researchers are left with a large innovation research need and challenge.

Associate Professor, PhD Peter Lindgren
Center Manager, International Center for Innovation

CHALLENGES IN NETWORK BASED INNOVATION OF BUSINESS MODELS

Innovating business models to become network-based is a complex venture, but critical for the survival of many companies. Network based business model innovation is not widely researched, though, and a key challenge concerns the network partners' very different business models and success criteria related to the innovation process and outcomes. The network partners' value equation in a new network-based business model is complex to understand but nonetheless important to drive and lead the model from idea - through the innovation process - to the global market. Another interesting challenge is the big difference in network construction and the demand for change of the individual network partners' business models.

INNOVATION CHALLENGES IN NORTH DENMARK REGION

Companies in the North Denmark Region are indeed characterized by being small, medium sized and strongly influenced by the global economy. They are indeed also motivated for innovation, they are flexible, agile and ready for innovating new business models – and ready to change their old business model and previous ways of innovating. These companies have - bearing the above mentioned in mind - some extremely interesting new business model potentials - especially in the global market. They are, however, deeply in need of new research in the field of network based business model innovation.

So everyone is talking about the importance of innovating network based business models – including EU and The Danish government. But what is a network based business model and how can these new business models be innovated in a quick, agile, and smart manner? These are some of the major research challenges faced by ICI´s researchers.

ICI RESEARCH IN BUSINESS MODEL INNOVATION

Business model innovation holds much more potential than product innovation, and we have to understand that we have not even touched the real potential of innovation. One of the first international publications from the ICI research group shows some of the variety and potentials of network-level business models.

These research themes were important research focus areas for ICI in 2008. This is why research at ICI in 2008 was multi faceted – however with a clear research strategy and backbone of what ICI wanted to achieve and focus on.

These research focus areas were in 2008 more specifically:

- The typologies of business models in networks
- Models and methods for business model innovation in networks
- Green business model innovation
- Innovation leadership
- Customer innovation process leadership
- Network based innovation leadership
- Attraction and innovation with different intellectual capabilities
- Risk management of business model innovation
- Innovation for Bottom Up Markets – The so called BOP - markets

International Center for Innovation (ICI) has taken up this research challenge and has been given a unique opportunity to show research and realize business model innovation together with industry, researchers and other knowledge organizations. Some of the research carried out at ICI is presented in further detail by ICI researchers in the following pages.

Center Manager International Center for Innovation

Associate Professor, PhD

Peter Lindgren

INNOVATION OF BUSINESS MODELS IN NETWORKS

Yariv Taran's current research interest lies in the area of innovation leadership and management, and in overcoming obstacles to innovation of the business models of companies in particular. In the process of clarifying the business model concept, Yariv tried to investigate first, whether the business model concept is adding something fundamentally new and important to management theory and practice. The reason for that was to provide a solid ground for the ICI research and planned workshops to be built upon. Through this process, it was found that there are different opinions concerning the business model concept, its components, its relation to strategy, and its innovation.

ICI AND BUSINESS MODEL INNOVATION

Given that the main theme of the ICI project is 'business model innovation', and since Yariv Taran's preliminary research in this field exposed the confusions and fuzziness in clarifying the business model concept, it was clear that exhaustive research is needed, and that a business model innovation theory also needs to be developed before making the first contact with the ICI [industrial] network partners.

Consequently, Yariv worked closely together with Professor Harry Boer, PhD and Associate Professor Peter Lindgren, in strengthening the understanding via sharpening the fuzziness surrounding those issues, and by doing so, they also designed the groundwork 'language' so they could [further] tackle more advanced and complex issues (i.e. understanding the processes of business model innovation supported by risk management processes). All in all, the contribution of Yariv's research (so far) to the ICI is therefore threefold:

- Further development of the language, processes and operationalization of networkbased business model innovation (to practice).
- Building a business model [innovation] theory - Contributing to organizational design & change, risk management and innovation management theories by using the business model literature as the underpinning interest.
- Designing preliminary innovative workshops to network companies that will participate in the ICI project.

THE BUSINESS MODEL CONCEPT IS HERE TO STAY

Yariv's research on business models has led us to believe that many buzzwords have come and gone over time, but it seems as if the business model concept is here to stay. Despite its fuzzy definition and operationalization, it is capturing more and more attention of academics as well as company managers. Consequently, with the help of his supervisors, Yariv is planning to continue and develop the business model theory and publish academic papers associated with his research - in order to share his research results with the academic community (research validity and reliability), and, last but not least, to put into practice the business model developed in workshops with the ICI [industrial] network partners.

Yariv Taran
PhD Student
The Faculty of Engineering,
Science and Medicine
Center for Industrial Production (CIP)
Aalborg University.

yariv@production.aau.dk

INNOVATION IN LEADERSHIP

Maizura Ailin Abdullah's main research areas within the ICI focuses on Innovation Leadership, mainly how Danish Small and Medium size Companies (SMEs) strive to achieve leadership by capitalizing on innovation qualities that can be found within their firms, as well as on qualities embedded in their external environments. Innovation Leadership is important for SMEs, especially in order to compete in the global market.

LEADERSHIP IS DIFFERENT FROM MANAGEMENT

Innovation abilities are crucial for company survival, even more so for SMEs of which Denmark has in abundance. Earlier studies on innovation discuss mainly the product innovation of the new product development process. They highlight the difficulties companies face in maintaining the ability to innovate, to improve their innovation processes, and to learn from the innovation process. Literature on managing innovation addresses mostly the issues of organizational survival. However, Innovation Leadership has many more aspects to it than management, and companies have to position themselves in the core of the innovation process.

INNOVATION LEADERSHIP - A STRATEGIC WAY OF THINKING AND PRACTICING INNOVATION

Innovation Leadership is a strategic way of thinking and practicing innovation that is applicable to all organizations, but especially in SMEs. This is because SMEs are small in size, making them vulnerable to the fast-moving pace of innovation and globalization. They lack multiple resources that are needed in order to lead innovation. However, paradoxically, because SMEs are flexible and light-structure, they are the perfect composite for Innovation Leadership, as they should be able to adapt fast to the requirements of the Innovation Leadership model.

ROYAL INSTITUTE OF TECHNOLOGY IN SWEDEN

From January 2009, Maizura Ailin Abdullah will be a PhD researcher (doktorand) at the Royal Institute of Technology (KTH) in Stockholm, Sweden. She will be working with the Integrated Product Development (Integrerad produktutvekling/IPU) group of the Department of Machine Design, under the School of Industrial Engineering of Management. In IPU, she will be working under the LIAN project (Management of Innovation Processes for Business-driven Networks). The LIAN project attacks the challenges identified for small environmental technology companies, mainly in developing their offers, collaborating with other companies in order to provide total solutions, and in creating and identifying new business models. Research topics associated with the LIAN project include Open Innovation, Business Models, Networking within Open Innovation scenarios, and Innovation Management. The LIAN project is funded by Swedfund.

In addition to this, Ailin will be involved with identifying Business Models for Bioservo AB, a privately-owned company located in the incubator Stockholm Innovation and Growth AB (STING). Bioservo develops unique muscle-amplifying products based on the patent protected SEM™ technology.

Maizura Ailin Abdullah
PhD Student
School of Industrial Engineering and Management,
The Royal Institute of Technology (KTH), Sweden

ailin@md.kth.se

KTH Industrial Engineering and Management

ICI AND INNOVATION IN NETWORKS

PhD scholar, René Chester Goduscheit's research is aimed at innovation in inter-organizational networks with specific focus on the initial phases of the network (how do companies identify and involve other companies in an inter-organizational network). The theoretical framework is Social Network Analysis.

THE RELATIONSHIP-ORIENTED ORGANIZATION

A number of researchers describe an overall tendency for organizations to open up in relation to the environment. Organizations are increasingly employing a new operating model which is based on the idea of a relationship-centered organization. The closed operating model focused on in-house expertise and how to manage physical and intellectual assets. The relationship-centred organization is increasingly oriented towards managing relational assets, namely their customers, suppliers and alliances. The relationship-oriented organization is thus shrinking its core by focusing on fewer activities on the one hand – and, on the other hand, on expanding its periphery by establishing relationships with external actors that can handle a substantial part of the activities which were previously managed intra-organizationally.

NETWORK LEADERSHIP

A central challenge of employing network-based innovation is the leadership of the network. An organization which initiates an inter-organizational network without considering the strategic impact of operating in a set-up with a variety of agendas and interests of the other organizations in the network is likely to fail.

COMPETITIVENESS THROUGH ECO-INNOVATION

The ICI research is aimed at developing tools for finding, forming and performing in inter-organizational projects:

- Finding the right partners.
- Forming expedient and sustainable ties with the partners.
- Performing with the inter-organizational network setting.

René Chester Goduscheit
Research Fellow, M.Sc. Political Science,
Grad. Dipl. Business Administration
The Faculty of Engineering, Science and Medicine
Center for Industrial Production (CIP)
Aalborg University.

chester@production.aau.dk

USER-CENTRIC METHODS IN INNOVATION

Jacob Hoj Jorgensen's, Research Fellow and PhD, focus areas in ICI has been 1) Adding to action research methodology applied in innovation network settings, 2) Management of the FFE in interfirm collaborations and 3) Implementation of User-Centric methods in network innovation settings or commonly known as "user driven innovation". Through this research, ICI has furthermore developed a workshop module on user-centric methods.

INTERFIRM COLLABORATION AND INNOVATION COMPETENCES

Innovation and innovation processes have traditionally been analyzed from the manufacturing companies' perspective. The innovation process is typically divided into a series of succeeding stages where the Fuzzy Front-End is the first stage to encounter. Several research projects have formulated recommendations for the manufacturer to improve the innovation process and enhance the chances of success. However, the vast majority of these projects belongs to an intra-firm paradigm where the manufacturer is considered to be the only part involved in the process, controlling and influencing the environment.

As a result of enhanced competition and pressure on manufacturing prices, focus is increasingly directed towards inter-firm collaboration and innovation competences. Companies can engage in such inter-firm collaborations with regard to many different activities, e.g. logistics, marketing, sales.

THE FUZZY FRONT END

Formal innovation partnerships have been widely researched. The research has provided useful insights into the dynamics and tendencies in formal R&D partnering relations. In ICI the research, however, also focuses on collaboration between independent companies prior to such formal agreements as joint ventures or other contractual agreements. The first phase of the innovation process is often referred to as the Fuzzy Front-End (FFE).

THE LEAD USER CONCEPT

In the late 1970s Eric Von Hippel was that first scientist to focus attention on the role of the customer in the industrial innovation process, which lead to the development of the Lead User concept.

Integrating the active customer in the innovation process can create collaboration between the manufacturer and the customer which supersedes the traditional value chain. The result is a system of co-production, with manufacturer-customer interaction and adaptation for the purpose of achieving added value and establishing a win-win situation.

Idea generation usually marks the beginning of the innovation process. And from the beginning, customers have proven to have a positive effect on the outcome. Ideas for new products may come from a variety of sources or initiatives, but direct customer contact has turned out to be the most important activity. This activity leads to specific requests and also reveals the general needs of the marketplace. Customers appear to be in the best position to assess the cutting edge needs of the industry.

Although the arguments for inter-firm collaboration and customer integration in the FFE are many, research on the management of such inter-firm collaboration is still scarce, which is why the International Center for Innovation is focusing its research on this topic as well.

Jacob Høj Jørgensen
PhD Student
The Faculty of Engineering, Science and Medicine
Center for Industrial Production (CIP)
International Center for Innovation (ICI)
Aalborg University.

jhj@production.aau.dk

GREEN THE NEW BLACK - ICI AND ECO-INNOVATION

Research Fellow, Suberia Clemmensens focus area in ICI has been on innovation in the climate change arena or commonly known as eco-innovation. Through this research, ICI is focusing on the approaches firms utilise to change and adapt their business as society transits into this new market reality of a low- or post-carbon economy. ICI works closely with small to medium-sized enterprises (SMEs) primarily located in North Denmark. One of the key findings is that whilst firms are aware of the climate change issue, they are equally unaware of what and how to approach this. Innovating business models is one strategic management tool, and we believe a holistic tool, to meet the challenges and demands that come with being environmentally conscious. This area, however, is scarcely researched.

THE GREEN DIMENSION

One of the challenges within this research field is that as one firm changes its business model, it also influences the way in which its network partners, suppliers, customers, buyers and the like do their business. Therefore, how firms can embrace and embed the green dimension throughout one or all components of its own business model as well as within a business model for the network of partners, comprises part of our research.

ECO INNOVATION RESEARCH

Our eco-innovation research has begun with analyzing the Danish household sector, given that it is the second largest final consumer of final energy consumption after the transport sector. The household sector alone provides opportunities to focus on low- or post-carbon business models that provide energy-effective and –efficient solutions not only to the firm but, equally important, to the customers' business model – their homes.

Denmark is renowned for its collaborative business approaches as well as being among world leaders in terms of seeking out and utilising alternative energy sources, however what appears to still be the case is the challenge of working across and embedding expertise from different disciplines so as to provide a seamless project or product, and user-friendly technology.

COMPETITIVENESS THROUGH ECO-INNOVATION

ICI's research in this field contributes to the regional growth agenda of the government by enabling SMEs to become competitive on the global market through eco-innovation. Understanding and adapting their business models to become more environmentally conscious, ICI believes, firms can gain a competitive advantage in this emerging market by being a first mover in filling niches and creating new market space.

Suberia Clemmensen
Research Fellow
The Faculty of Engineering, Science and Medicine
Center for Industrial Production (CIP)
International Center for Innovation (ICI)
Aalborg University.

suberia@production.aau.dk

ICI AND THE DEVELOPMENT OF A NEW THEORY OF LEADING BUSINESS MODEL INNOVATION BASED UPON PHILOSOPICHAL THEOLOGY AS DIFFERENT THINKING

In ICI, Kristin Falck Saghaug is working with the aim to address research within a cross disciplinary field, which implies combining the area of innovation of new business models (BM) with philosophical theology and art. This opens for investigating a new position on innovation leadership on the premises of relation, participation and creation. The area of business, innovation and theology is a new and up till now rather unexplored combination, and this project aims at contributing to science by adding valuable research to:

- On the macro level: understanding human creation on the basis of different thinking and the premises for/obstacles to it. Here the depiction of human creation as macro expresses the center within modern theology: human beings and their search of life fulfillment, of meaningfulness.

- On the micro level: the area of innovation of network based business models (BM) and its implications regarding the attraction of different partners and employees for the innovation task, aiming to keep the partners and employees , and creating and sustaining an environment for innovating BMs and realizing them. This also implies the development of potential social BMs – addressing human relations, social responsibility and meaningful customer and business relations.

On the background of case material from innovation of business and BMs, and addressing the use of the Blue Ocean and Innovation Leadership methodology amongst others, the ability to differentiate and "think different" is a strong element within the very strategy of creating a blue-ocean and a new BM. The ICI research on innovation shows the importance of "different thinking" when working with SME companies in the region on their preliminary step towards a new BM.

ICI believes that this methodology will be very important to the regional innovation and growth agenda, enabling SMEs to become more innovative, competitive and sustainable on the global market when engaging in innovation of new business models (BM).

Kristin Falck Saghaug
Research Fellow
The Faculty of Engineering, Science and Medicine
Center for Industrial Production (CIP)
International Center for Innovation (ICI)
Aalborg University.

kfs@production.aau.dk

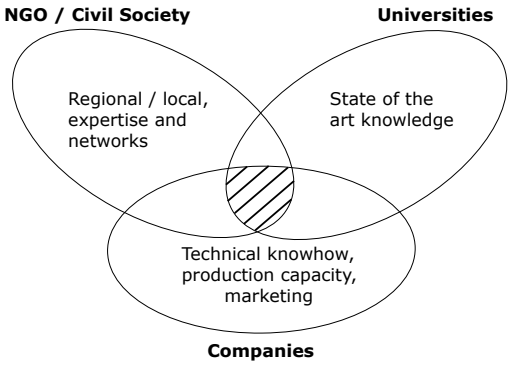
Network based business models targeting BoP innovation

PhD student Jacob Ravn is focusing on network based business models targeting the needs of the 4 billion people living at the base of the economic pyramid (BoP) for less than 2$ a day.

This is based on the case access2innovation that was launched in 2007 inspired by the basic idea that when combining knowledge and resources from NGOs, the private sector and researchers it is possible to develop innovative solutions targeting the vast unattended needs in developing countries as shown in the Millennium Development Goals - www.un.org/milleniumgoals.

This is based on a unique constellation between DanChurchAid (DCA) and the close partnerships of this organization with more than 100 NGOs worldwide, Aalborg University (AAU), Confederation of Danish Industry (DI) and two regional SME offices representing a total of more than 12,000 companies in Denmark.

The challenges are, however, that very little knowledge exists on how to develop and implement such network based activities, and this is why Jacob Ravn, supported by ICI, through an action research approach is assisting the access2innovation consortium (read more on page 18-19) with analysis and applied theoretical insight into business model innovation, formulation and implementation of network based initiatives, and implementation of network based business models in the BoP markets.



Network based business models in a nut shell

Jacob Ravn
Project manager / phd student: access2innovation
www.access2innovation.com
Department of Development and Planning
Aalborg University
Fibigerstraede 13
DK-9220 Aalborg Ø
Mobile: + 45 2770 2318

jacob@plan.aau.dk

8 profils

Organization

CHALLENGES IN THE ICI PROJECT

When the first words were written in the project application which later turned out to pave the way for the launching of ICI, nobody really knew which administrative conditions would apply to the project. The regional growth fora were in the process of establishing themselves and, among other things, organizing the distribution of trade promotion funds from the European Regional Development Fund. As it turned out, these EU funds would be allocated by Growthforum Nordjylland to the ICI project. A new government order had just been passed on how regional development funds were to be administered, and there were substantial differences between conditions applying under the former and the new program periods. This, in combination with the volume of the ICI project, made it clear from the beginning that a number of challenges were to be encountered when organizing and administering the project so as to meet the requirements made by the funding body.

The ICI project is definitely the largest regional business promotion project ever launched at Aalborg University. For that reason the ICI project administration is a challenge to many internal systems and procedures at the university. Systems and guidelines laid down by the funding body are also challenged by the size and complexity of the ICI project. The combination of business promotion and research in one big project is unique, and ICI's project administration has been forced to find completely new ways and transcend the boundaries of how to organize and administer university projects.

A large amount of work has been done to organize a number of administrative procedures to secure that the progress of the project is not hampered by the many administrative requirements imposed on the ICI project. The large number of challenges and the large amount of work involved in meeting them have resulted in the fact that ICI is now well on its way towards an administrative setup which is not only used to control the ICI project, but which is also in a continuous process of being refined and streamlined. In this way the discipline which is essential in the project administration at Aalborg University is strengthened, and we will be able to manage the administration of future projects which will emerge in the wake of ICI.

Anders Vestergaard
Administrative and Economy Officer
International Center for Innovation

Organization of International Center for Innovation (ICI)
**John Ebsen, Consultant at Business Link North Denmark works closely together with the ICI (see picture on page 33)*

Susanne Hansen, Secretary; Morten Lund, ICI LAB manager; Sarah Gram, Communication and Project Officer; Peter Lindgren, Center Manager; Anders Vestergaard, Economy and Administration Officer;

The board of ICI

The ICI board has six (6) professional members:

- One representative of the municipal authorities
- One representative of Business Link North DK
- Three representatives from the business world
- One representative from Aalborg University

In addition to these, one representative from the North Denmark Region, the Growthforum secretariat, serves on the board as an observer. The board convene between three and four times a year and act as recommendation committee in relation to projects applying to ICI for support.

It is up to the board to evaluate the contents of an ICI project in relation to ICI's allocation criteria, and in case of a positive evaluation to recommend projects for support from the ICI funding pool. On the basis of their professional backgrounds and experience, board members are also required to evaluate the projects submitted and assess the professional and commercial sustainability of such projects.

Thus, the task of the board is to evaluate the durability of the new business models presented at board meetings, and at the same time secure that the success criteria of the ICI network based business model is met and fulfilled by the network.

In addition, the board may present suggestions and recommendations to the projects which are accepted. The board must also contribute to securing that the projects accepted by ICI have the required drive, so that the project will have a business promoting effect, and so that all projects live up to CIC's allocation criteria.

- Jens Otto Stoerup, Managing Director, The North Sea Oceanarium and Research Park (www.nordsoenoceanarium.dk)
- François Grimal, Managing Director, Dolle A/S (www.dolle.dk)*
- Jesper Christensen, Municipal Manager, Hjoerring Municipality (www.hjoerring.dk)
- Flemming Larsen, Managing Director, Business Link Denmark (Væksthus Nordjylland) www.vhnordjylland.dk
- John Johansen, Professor PhD and Center Director, Center for Industrial Production, Aalborg University.
- Peter Bagge-Nielsen, Managing Director, Torvet.dk (Chairman) www.torvet.dk
- Peter Lindgren, Associate Professor PhD, Center for Industrial Production, Aalborg University (Center Manager, International Center for Innovation) (www.ici.aau.dk, www.cip.aau.dk, www.aau.dk)
- Henning Christensen, The Growth forum North DK (Observer) (www.rn.dk)

* François Grimal joined the board in spring 2009 and is thus not on the picture.

Jens Otto Stoerup, Jesper Christensen, Flemming Larsen, John Johansen, Peter Bagge-Nielsen, Peter Lindgren, Henning Christensen

NORDSØEN OCEANARIUM

VÆKSTHUS Nordjylland

TORVET.DK

Hjørring Kommune

AALBORG UNIVERSITET AD NYE VEJE

DOLLE

REGION NORDJYLLAND VÆKSTFORUM

Center for Industrial Production

Aalborg University

Aalborg University in Denmark has nearly 14,000 students and employs approximately 1200 faculty and 800 administrative and technical staff. The faculty of Engineering, Science and Medicine has 6000 students enrolled (1100 international students).

Aalborg University is widely known for its special form of learning which is based on problem-based project work, partly taking place in groups. It emphasises that students cooperate with companies, organizations and institutes of varying kinds when solving problems. Important research centers at Aalborg University: Center for Teleinfrastructure (CTIF), Center for Sensory-Motor Interaction (SMI), Machine Intelligence Group, Center for Embedded Software (CISS) and many others.

INTERNATIONALIZATION AT AALBORG UNIVERSITY
Internationalization has always been and continues to be a very important part of the university's trademark, which is reflected both in the curricula and in the number of study periods abroad. An increasing number of Danish students choose international stays and studies as an integral part of their education and likewise, an increasing number of international students and researchers come to Aalborg University to study and conduct research every year. AAU continuously works at expanding and improving its cooperation with other universities and international research institutions and already has a large network at different levels. The university is e.g. a member of The European Consortium of Innovative Universities (ECIU), which consists of 10 innovative European universities whose purposes are the exchange of experience and the development of new projects within education, research and regional development.

ICI AND INNOVATION
Innovation, creativity and untraditional thinking are the keywords in developing new ideas. Today the pace of developing new products is very high, and many companies struggle to keep up with the development on the market. The adaption to a new form of innovation is therefore very important and necessary for a large number of companies today. Innovation is in fact the driver in many networks between business and research today. There are already several strong and well-functioning networks between research and business. The aim of ICI is to bring the known methods of research-business networks and the normal perception of innovation further. This is done by bringing business and research together in networks across industries and professions with the purpose to establish totally new ideas, projects and markets.

The co-operation across the normal boundaries between industry and science has shown that there is a great potential for brand new ideas and markets. I am sure that ICI will contribute to necessary new ways of thinking, which will lead to new products that will not only represent a continued development of known products but will bring totally new functionalities and products to the market.

STUDENTS
Close to 14,000 students are enrolled at Aalborg University, ranging from students at preparatory courses through doctoral-level candidates. Of these, 12.5% are international students, coming from different countries around the world. Approximately 3,100 students are enrolled at the Faculty of Humanities, 4,600 students at the Faculty of Social Sciences and 6,500 at the Faculty of Engineering, Science and Medicine.

FACULTY AND STAFF
Aalborg University employs approximately 1350 faculty and 1100 administrative and technical staff.

Frede Blaabjerg, Dean,
The Engineering,
Science and Medicine
Faculties Office
Aalborg University
Niels Jernes Vej 10
DK - 9220 Aalborg Ø
www.aau.dk

Frede Blaabjerg, Dean, The Engineering, Science and Medicine Faculties Office

Business Link North Denmark

ICI operates in partnership with Business Link North Denmark, which through its close collaboration with trade offices is well acquainted with the north Jutland business community. Business Link North Denmark plays an important role in the collaboration with participating businesses in ICI, as Business link North Denmark is in charge of the specialized professional service to the business community in north Jutland.

INNOVATION IN NETWORKS

ICI challenges the traditional view of innovation by collaborating across professional and industrial boundaries, thus facilitating the distribution of new knowledge through the constellation: businesses in networks, research/knowledge competencies, Aalborg University, Business Link North Denmark, and the trade offices.

The very ability to create new business models across trade lines and professional areas for customers in the global market is important for the growth and future survival of business enterprises. In this connection ICI and Business Link North Denmark can combine efforts to support the business enterprises in their attempts to succeed in the global market.

CLOSE COOPERATION

As described, Business Link North Denmark works in close collaboration with Aalborg University, and has posted an employee at the university to coordinate activities and projects. This is the first time that Business Link North Denmark and Aalborg University have engaged in close collaboration of this nature, and it is therefore an exciting challenge for all parties involved – a challenge which will hopefully serve as an example of how researchers and consultants may mutually optimize their competencies. In this way, Business Link North Denmark may for instance offer relevant and practical knowledge regarding financing, strategy, internationalization, etc., and facilitate the participation in the other programs under Business Link North Denmark or Springboard at Connect Denmark.

John Ebsen, Consultant at Business Link North Denmark, has an office at ICI, Aalborg University

BUSINESS LINK NORTH DENMARK (VÆKSTHUS NORDJYLLAND)

- Assist small and medium-sized enterprises (SMEs) to grow and develop their businesses through consulting and continuous supervision (free of charge).
- Work in collaboration with: local business councils, knowledge institutes, private consultants and Vækstfonden (public growth fund), The Trade Council of Denmark, Danish Design Center and a wide variety of other public business promoting players.

BUSINESS MODEL INNOVATION EDUCATION

In addition to project coordination and contact to enterprises, ICI will also participate in equipping Business Link North Denmark consultants for engaging in the most recent knowledge within business model innovation. So it is the responsibility of ICI to provide the consultants with a competence boost within business model innovation.

I have no doubt that the collaboration between Business Link North Denmark and ICI is both ground-breaking and a big challenge. By taking their own medicine and kick-starting collaboration between people representing different disciplines (here researchers and consultants), Business Link North Denmark and the University will no doubt benefit future promotion of trade in the North Denmark Region.

Direktør Flemming Larsen, Væksthus Nordjylland

Flemming Larsen
Niels Jernes Vej 10
9220 Aalborg Ø
Phone: +45 7021 0808
www.vhnordjylland.dk

VÆKSTHUS Nordjylland

Regional Development – Growthforum

Growthforum Nordjylland is a forum for regional development in which the business community, academia, and the two sides, industry and government, meet to enhance commercial growth and development of the North Denmark Region.

Growthforum is supported by the Regional Development Sector, which is a part of the Regional Council's administration, whose primary responsibilities are to implement the Council's Regional Development Plan and the Growthforum Commercial Development Strategy. The plan and strategy serve to combine and coordinate initiatives in areas such as innovation, entrepreneurship, clusters within Information and Communication Technology (ICT), food and health, sustainable energy and development of human resources in order to secure the focused and consistent growth and development of the region.

REGIONAL INNOVATIVE COMMUNITY

One objective of Growthforum Nordjylland is to establish a regional innovative community of an international standard and to facilitate knowledge exchange within innovation through projects, consultation, networking etc.

Innovation can be driven by users, scientific research, market forces or prices. Innovation does not only concern the development of new ideas or the application of new technologies, but also has to to with the ability to recreate, rethink and combine materials, methods etc. in ways never seen before. For the business community, innovation also relates to the ability to turn ideas into business opportunities.

The regional objective of establishing an innovative community is to facilitate initiatives in order for the business community to renew itself within all areas of business - that is organization, management, processes and commodities. But innovation is not created out of thin air.

A number of companies in the North Denmark Region within both the traditional business area, e.g. food and construction, and new business areas such as ICT and health technology are facing growing demands in terms of innovation. Companies within the traditional business area who compete primarily on prices will face competition on the ability to create new products and upcoming companies' ability to create new concepts and a growing global market. Companies within new business areas are met by similar demands, e.g. to use new technology to create user-friendly products which meet yet unknown demands. Furthermore, the regional business community is challenged by the growing international competition and the speed at which new ideas are developed or/and copied. For this reason the ability to adapt is important, and new processes of innovation in which the development of ideas is created across traditional boundaries locally, nationally and globally are in focus.

ICI AND GROWTHFORUM

To push the regional development forward and to meet the demands of the global market ICI employs the existing research within innovation at Aalborg University. In cooperation with companies and organizations ICI will establish 15 networks. Each network will work to create new global business models and will also focus on the development of commercial products and services and combine theory and practice from within creative national and international academic communities. The objective is to underpin creativity, the ability to renew, and the commercialization of global business models, which is needed in order for the regional companies to gain success globally.

Ulla Astman
Chairman of the North Jutland Regional Council and the North Jutland Growthforum

REGION NORDJYLLAND
VÆKSTFORUM

Innovation Center Denmark – Silicon Valley

Innovation Center Denmark, Silicon Valley is one of the direct results of the globalization strategy designed by the Danish government in 2006 to help achieve the ambitious objective of becoming one of the leading knowledge based nations in the world by 2020.

BRIDGING RESEARCH INSTITUTIONS, COMPANIES AND CAPITAL

The mission of Innovation Center Denmark is to build bridges between research institutions, companies and capital in Denmark and in Silicon Valley, to accelerate the entry of Danish companies into Silicon Valley, promote US investments in Denmark, facilitate research cooperation, and provide inspiration to help drive innovation in Denmark. In other words a perfect match for the International Center for Innovation at Aalborg University.

Two ministries work together at Innovation Center Denmark; the Ministry of Foreign Affairs and the Ministry of Science, Technology and Innovation.

PRODUCTS AND SERVICES

Innovation Center Denmark helps companies and startups to establish a basic network to build on and can help set up targeted meetings with e.g. venture capitalists, possible future partners and researchers.

The R&D team at Innovation Center Denmark can assist researchers with the planning of targeted visits to universities and research environments in the San Francisco Bay Area with the aim of establishing future collaboration and partnerships as well as local assistance, and support setting up joint Danish-Californian research workshops, etc.

This product requires the company to spend at least a week in Silicon Valley. The target group of Innovation Center Denmark is companies and startups which have decided to establish a US entity, or delegations of companies, organizations or institutions that need inspiration for moving forward.

COLLABORATION WITH ICI

Throughout the last couple of years Innovation Center Denmark has worked with ICI in a number of ways, helping ICI establish a base in Silicon Valley, posting researchers and interns in Sillicon Valley, providing intros to new business partners and planning of targeted visits for ICI and local business partners in Northern Jutland. An example of the cooperation is the recent agreement to send between three and five engineering students to Silicon Valley as part of their studies at Aalborg University, Center for Industrial Production. Innovation Center Denmark and ICI collaborated with an American partner to provide the students with relevant internships in the valley. At Innovation Center Denmark we look forward to increasing our collaboration in the near future.

Innovation Center Denmark – Silicon Valley
200 Page Mill Rd
Suite 100
Palo Alto, CA 94306
United States
Tel: +1 650 543 3180
Fax: +1 650 327 2522
www.innovationcenterdenmark.com
info@innovationcenterdenmark.com

INNOVATION CENTER DENMARK
SILICON VALLEY

Golden Gate Bridge, San Francisco

Stanford University

Henrik Bennetsen is the associate director of the Stanford Humanities Lab. He maintains a strong interest in virtual worlds and open source technology. He is heading the Speed Limits research project, a collaboration project with the Danish Bornholm's Kunstmuseum (Art museum) to explore artistic expression inside a virtual space. Previously Henrik led the Lifesquared research project. The idea was to explore the building of a 3D immersive archive of the art of Lynn Hershman inside the virtual world of Second Life. The work was recently shown at The Museum of Fine Arts in Montreal and is planned for exhibition at the SFMOMA in 2008. In 2007 he co-founded the Stanford Open Source Lab that has since grown to about 60 members from across the Stanford community. In the fall of 2006 he was a part of the Stanford course The Human and The Machine that used Second Life as a teaching tool. Henrik is Danish and holds a master's degree in Media Technology and games from the IT University of Copenhagen and a bachelor's degree in Medialogy from Aalborg University. Before his return to the world of academia Henrik was a professional musician and still has a strong side interest in creative self expression augmented by technology.

"In Stanford Humanities Lab we take a great interest in how traditional things like people working together on projects are in current years being changed by new technology. In line with our "lab" ethics we construct prototypes, which we then iterate over and subsequently improve. At the International Center for Innovation we see a partner who shares our interest in new was of acting and has a healthy respect for the fact that a more thorough understanding requires practical insight. We believe that our differences as regards both professional and cultural aspects are a strength, and we are very hopeful as to our present exploration of future common projects."

Henrik Bennetsen, MSc in Media Technology, Associate Director of the Stanford Humanities Lab
Stanford University

Wallenberg Hall, 450 Serra Mall
Building 160, Stanford University
Stanford, CA 94305-2055, USA
http://shl.stanford.edu/

H-STAR IS A STANFORD INTERDISCIPLINARY RESEARCH CENTER FOCUSING ON PEOPLE AND TECHNOLOGY

H-STAR, the Human-Sciences and Technologies Advanced Research Institute, is a Stanford interdisciplinary research center focusing on people and technology — how people use technology, how to better design technology to make it more usable (and more competitive in the marketplace), how technology affects people's lives, and the innovative use of technologies in research, education, art, business, commerce, entertainment, communication, national security, and other walks of life.

René Chester Goduscheit visited Stanford University in 2008 to develop his research:

"I spent the autumn semester in 2008 as a visiting scholar at H-STAR (Human-Sciences and Technologies Advanced Research Institute) at Stanford University. I used my visiting scholarship as a platform to work together with the cutting edge competencies on innovation management at Stanford University and at other Californian universities (UC Berkeley, UC Davis etc.). Furthermore, I got in contact with a number of companies that are working intensively with open innovation models (Pacific Gas & Electric Company, SAP etc.). My future research will surely benefit from the contacts that I have established during my period in California"

You can read more about René Chester Goduscheits research on page 24.

- H-STAR: www.stanford.edu/dept/h-star/cgi-bin/hstar.php
- As part of the partnership agreement The Danish Agency for Science, Technology and Innovation (DASTI) has acquired two so-called "Visiting Slots" for PhDs and researchers for a duration of 24 months at H-STAR: www.siliconvalley.um.dk

Testimonials

DOLLE A/S

Dolle A/S is located in Frøstrup in the north of Denmark. Founded in 1982, Dolle A/S is a dynamic young export company which has grown rapidly to become one of the world's largest manufacturers of attic ladders and staircases, with exports representing over 90% of sales. Their products can today be found in over thirty countries around the world.

"As the manager of the world's largest staircase manufacturing firm I have, during the past 10 years, attempted to apply a goal-oriented approach to innovation and development of our business model. In most cases this will involve collaboration with others, and it requires access to expert knowledge and risk capital. In my opinion, ICI is an excellent partner, primarily because it is able to spot the good ideas and innovative business concepts that exist in our region, and subsequently follow up by supporting their further development and implementation. What is essential is to spot the future development potential of our region."

François Grimal
Managing Director, Dolle A/S, ICI Boardmember

Dolle A/S

Nordsøen Forskerpark og Nordsøen Oceanarium

THE NORTH SEA SCIENCE PARK AND THE NORTH SEA OCEANARIUM

In 2006 Jens Otto Størup became director of the North Sea Research Park and the North Sea Oceanarium. Both institutions are situated on the Hirtshals harbor front. One of the institutions is a research park focusing on fish and fishing in the North Sea. The other institution is a well-known tourist attraction conducting an adventure business.

Jens Otto Størup is an MSc in Economics and Management from Aalborg University. Subsequently he has supplemented his qualifications with an MBA degree from Henley Management College.

Through his job in Hirtshals Jens Otto has acquired many contacts with innovation and innovation management within both food production and the leisure economy.

"ICI is an initiative which may help secure that business enterprises in North Jutland obtain crucial professional assistance in situations where their business development often comes to a halt. If small and medium-sized business enterprises in North Jutland are to grow – for the benefit of the employment situation in the region, for instance – well, then the development of business models is crucial. Attractive new products are not enough."

Jens Otto Størup
Managing Director, The North SeaOceanarium and Research Park, ICI Boardmember

Center for TeleInFrastruktur (CTIF)

International Center for Innovation (ICI) and the Center for TeleInFrastructure (CTIF) directed by Professor Ramjee Prasad initiated cooperation between the two centers in 2008.

Center for TeleInFrastruktur is an international research center with its headquarters at Aalborg University and offices in Copenhagen, Italy, India and Japan. At Aalborg University, researchers from five Departments and three Research Centers are affiliated with CTIF, in order to bring together the university research in wireless communication.

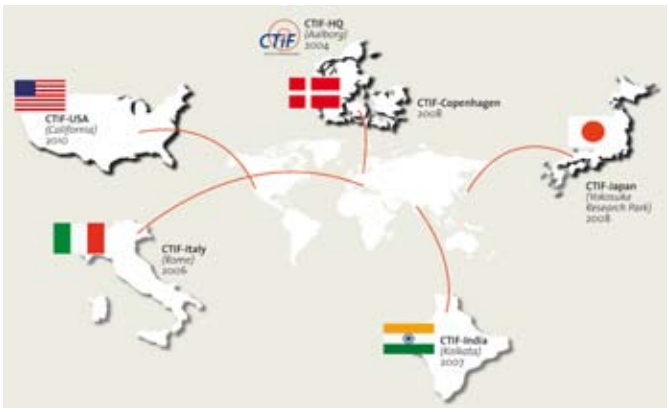
Center for TeleInFrastruktur (CTIF) is a paradigm shift in innovative research and higher education in the area of emerging communication technologies. Its pioneering concept of world-wide distribution of research and educational activities, combined with commercialization of the results, provides entrepreneurship at the level of Masters Education, and innovation at the PhD level.

CTIF's mission is to serve as a platform for joint activities in the convergence of networks, technologies, services and application fields through regional, national and international cooperation. CTIF has strong ties with national and international industrial partners and is an integrated and active part of the association of mobile and wireless industries located in northern Denmark. CTIF aims to play a strong role in driving innovation within the IT and Communication industry cluster in North Jutland.

ICI's focus on innovation and development of new global business models provides a framework for cooperation, which will strengthen both organization areas of interest - and thus exploit the synergy between the two.

ICI is an open and central innovation partner, both for companies and researchers at regional, national and international levels, which is why the cooperation with the regionally and internationally funded center CTIF adds further meaning to ICI.

CTIF Director, Professor Ramjee Prasad



CTIF World map. CTIF has offices in Denmark, Japan, India and Italy.

Center for TeleInFrastruktur (CTIF)
Aalborg University
Niels Jernes Vej 12
DK-9220 Aalborg
Denmark
Fax: +45 9815 1583
Web: www.ctif.aau.dk

Center for TeleInFrastruktur

FUNDING AND FUTURE PLANS 2009

The International Center for Innovation (ICI) was established in 2008, and the goal is to have a strong platform and framework for innovation of global business models in north Denmark. ICI has a budget of DKK 88 million over the four years primarily financed with EU funding through the Growth Forum in the North Denmark Region. The long term aim is to ensure the sustainability of ICI after 2012, which the ICI management team is working on by developing the "ICI business model" in cooperation with CTIF, SmartCity, Stanford University, Innovation Center Denmark etc.

SECOND OPERATIONAL YEAR

In 2009, International Center for Innovation (ICI) will be in its second operational year. This means that ICI is halfway in fulfilling its obligations, and this will be reviewed in the spring of 2010 in a midterm evaluation report.

NETWORK ACTIVITIES IN 2009

In 2009 ICI wishes to increase its network activities with another four to six networks, which will bring the total up to seven or nine networks - an increase in the activity level in ICI of 2/3. Thus, the main focus of the ICI will be on the core activity in ICI – innovation of new business models in the ICI networks. To be successful it is important to cooperate closely with all ICI partners – Municipalities, Business Link North Denmark and the North Denmark Region.

FUTURE PROJECT DEVELOPMENT

Since 2006 ICI has participated in the process of establishing the regional SmartCity project www.smartcity.dk. Thus ICI policy has been not to develop projects in the building industry without working closely together with the management behind SmartCity. In 2009 the SmartCity project finally becomes a reality, and ICI is looking forward to seeing the establishment and working together with the SmartCity project.
In 2009 ICI plans to invest more time and energy in the development of projects together with Center for TeleInFrastructure (CTIF), and Stanford University and others. The cooperation with CTIF means that ICI has agreed to participate in at least two FP7 EU projects focusing on developing new business models in a European context. ICI will increase the cooperation with Stanford University. Especially around the work on the ICI LAB platform where the vision is to digitalize the business model.

The aim is to become more involved with network partners nationally and internationally, in order to cooperate on projects where ICI can complement the work others are doing. In 2009 and 2010 ICI will participate in new projects both regionally, nationally and internationally – but always with a focus on network based business model innovation (to the global marked).

INTERNATIONAL INNOVATION HUB IN SHANGHAI

In 2008 ICI opened its Innovation hub in Silicon Valley, USA, and in 2009 ICI takes its first step towards opening its second Innovation hub in Shanghai, China. The first step towards finding the right network partners in Shanghai will be taken on a study trip in September 2009, which will eventually lead to the launch of the second innovation hub during the spring of 2010.

You can follow ICI through the newsletter (subscription on the www.ici.aau.dk) and the website.

THE EUROPEAN UNION

The European Regional Development Fund

Investing in your future

VÆKSTHUS Nordjylland

REGION NORDJYLLAND

VÆKSTFORUM

AALBORG UNIVERSITET AD NYE VEJE

Center for Industrial Production

08

International Center for Innovation
Fibigerstraede 16
DK-9220 Aalborg
Denmark
P: +45 9940 7111
F:+45 9815 3040
www.ici.aau.dk

International Center for Innovation